

Archeological Investigations for the Replacement of the South Areaway Wall of the Ironmasters' House Hopewell Furnace National Historic Site Berks County, Pennsylvania



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1 Introduction

Hopewell Furnace National Historic Site proposes replacement of a portion of the Ironmasters' Kitchen Retaining Wall (IDLCS 81461; Structure # 001C) forming the south boundary of the south areaway of the Ironmaster's House (IDLCS 0069F: Structure # 001). Replacement of the wall requires construction of a new footing extending approximately one and one-half feet north of the existing wall. Although the existing wall was constructed in 1922, previous archeological investigations at the Ironmaster's House have revealed significant architectural elements buried immediately beneath the surface of the north, east, and south passageways (Motz 1941, Abel 1964, Marie 1984).

2 Background

Hopewell Furnace National Historic Site is located in Chester and Berks Counties, Pennsylvania (Figure 1). The park preserves and commemorates the core of a mid eighteenth through late nineteenth century ironworking center. The site was acquired by the National Park Service in 1935 and extensively developed as a Civilian Conservation Corps (CCC) and Works Progress Administration (WPA) project. The Ironmasters' House was occupied continuously from its construction in 1733 until its purchase by the NPS. The south areaway, the location of the proposed project, was constructed in 1922 by caretaker Nathan Care (Figures 2 and 3). In 1941, NPS archeologist Motz identified an earlier south areaway "wall" when investigating below the stone steps in the southeast corner of the areaway west of the bake ovens. Later excavation by NPS archeologist Abel followed this wall (it was in actuality a drain) paralleling the east wall of the Ironmasters' House. The area proposed for the new foundation for the south areaway south wall was immediately west of the drain (wall) identified by Motz and Abel. Archeological investigations associated with preservation and rehabilitation in the 1970's were conducted in the south areaway adjacent to the south wall of the south addition (or Moulder's Kitchen) built around 1826. Excavation of two units did not identify any earlier wall or features, rather identifying only "...3 " of mottled, dark brown soil above naturally occurring yellow sandstone" (Marie 1984:29).

In accordance with the National Historic Preservation Act of 1966 as amended, and the provisions of the Programmatic Agreement between the National Park Service, the National Council of State Historic Preservation Officers, and the Advisory Council for Historic Preservation (PA), this proposed action was reviewed for its potential effect on the integrity of the archeological resources that contribute to the property's National Register eligibility. Since the proposed construction is located outside of areas of known , testing was recommended to determine if the project would have an effect on unknown archeological resources.





Figure 2: Ironmasters' House looking north with bake over to right and south areaway wall in center.



Figure 3: South areaway wall looking south prior to excavation.

3 Archeological Investigations

Investigations were conducted in accordance with the National Park Service's "Secretary's Standards for Archeology." Soil profiles were by photography and measured drawings. Tests were excavated to sterile soil or to the interface with suspected historic features, with all soils passed through one-quarter inch hardware cloth. Soil colors were recorded using the Munsell soil color system. Curatorial activities were conducted in accordance with the NPS's *Museum Handbook*. All archival materials associated with this project are curated at Hopewell Furnace National Historic. All artifacts in this project were recovered from contexts associated with modern disturbances and in consultation with the park curator were discarded after analysis (See Appendix 1). All activities associated with this project were conducted by the author in 2000, with archeological testing conducted on August 16 and 17.

The south wall of the south areaway measures 12.7 feet long, extending from the west edge of the passage between the wall and the bake oven to a set of steps down into the south areaway (Figures 4 and 5). Excavation proceeded by three feet by one and one-half foot long units north of the wall, approximating the location of the proposed new footing. Unit dimensions were recorded west from the northeast corner of the trench.

Unit 1 extended from the northeast corner of the trench to three feet west and was designated "Unit 1: 0-3'W." The surface of Unit 1 was very dark grayish brown (Munsell 10YR 3/2) loam with medium-sized (between 0.05 and 0.1 foot diameter) commercial gravel to 0.4 feet below surface (fbs) (Figure 6). This stratum was deposited by recent (post 1940's) construction to level the areaway. Stratum 2 began at 0.4 fbs and extended to 0.6 fbs. Stratum 2 was composed of very dark grayish brown (Munsell 10YR 3/2) silt loam and pockets of light gray (Munsell 10YR 6/1) gravel dust concentrating in the southwest quadrant of the unit. Stratum 3 appeared across the entire unit at 0.6 fbs composed of a mix of dark brown (10YR 4/3) clay loam soil, interbedded sandstone rock, and sediments from the rotting rock with the rock appearing denser in the northwest quadrant of the unit (Figure 7). Excavation to the depth of 1.0 fbs revealed the base of Stratum 3 to be a zone of densely packed natural sandstone at which point excavation was suspended.

Unit 2 was located between 6 and 9 feet west of the northeast corner of the trench and was designated "Unit 2: 6-9'W." The surface (like Unit 1: 0-3'W) was covered with very dark grayish brown (Munsell 10YR 3/2) loam which was designated Stratum 1. At 0.3 fbs an extensive root mass was exposed in the center and southwest corner of the unit (Figure 8). Removal of an additional 0.15 feet of Stratum 1 indicated that the root mass represented 30% of the unit at this depth and probably extended over most of the unit at a greater depth. Reasoning that the root mass would have displaced most if not all of any culturally modified stratigraphy within the unit, excavation was suspended at that depth.

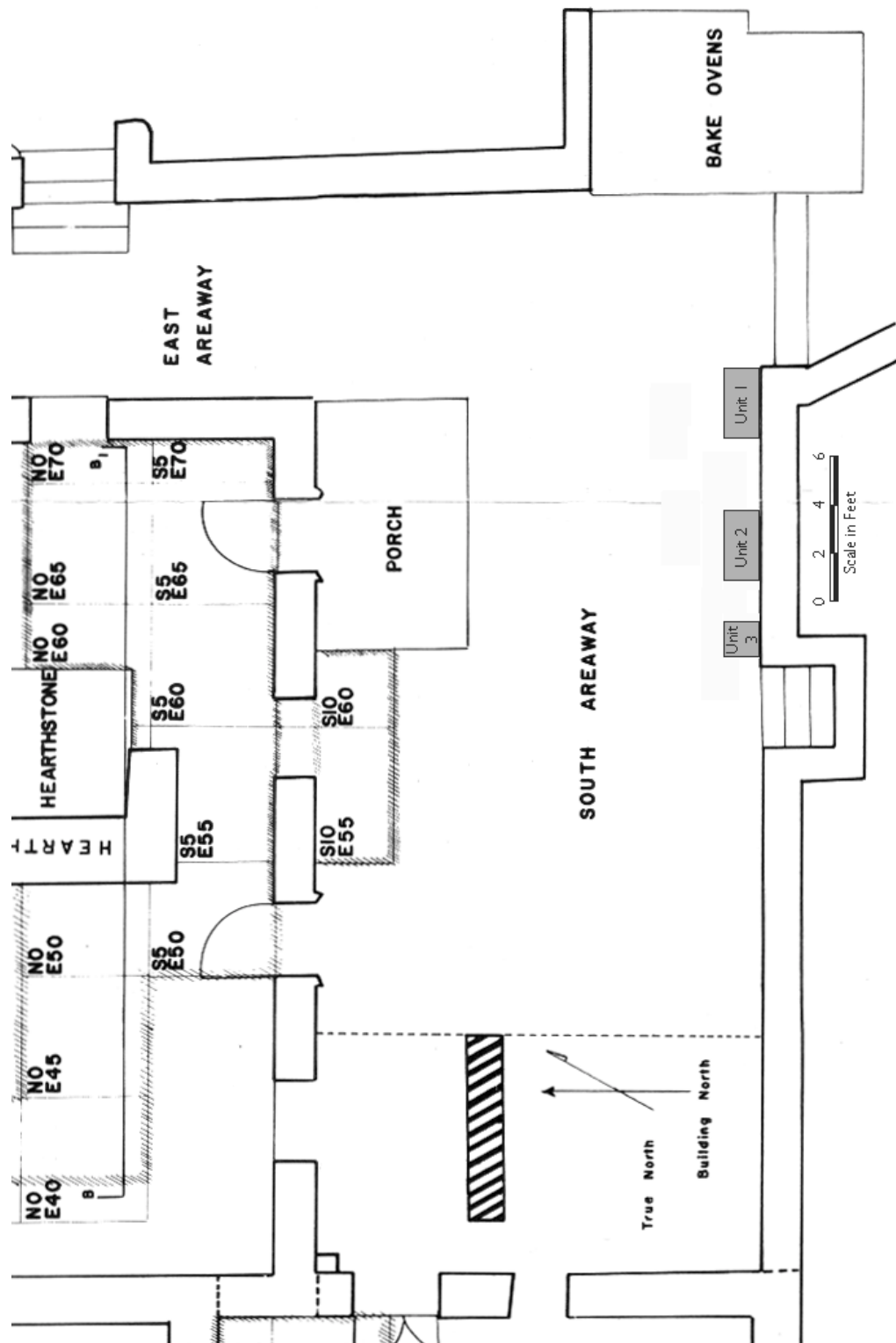


Figure 4: Location of archeological tests within south areaway.

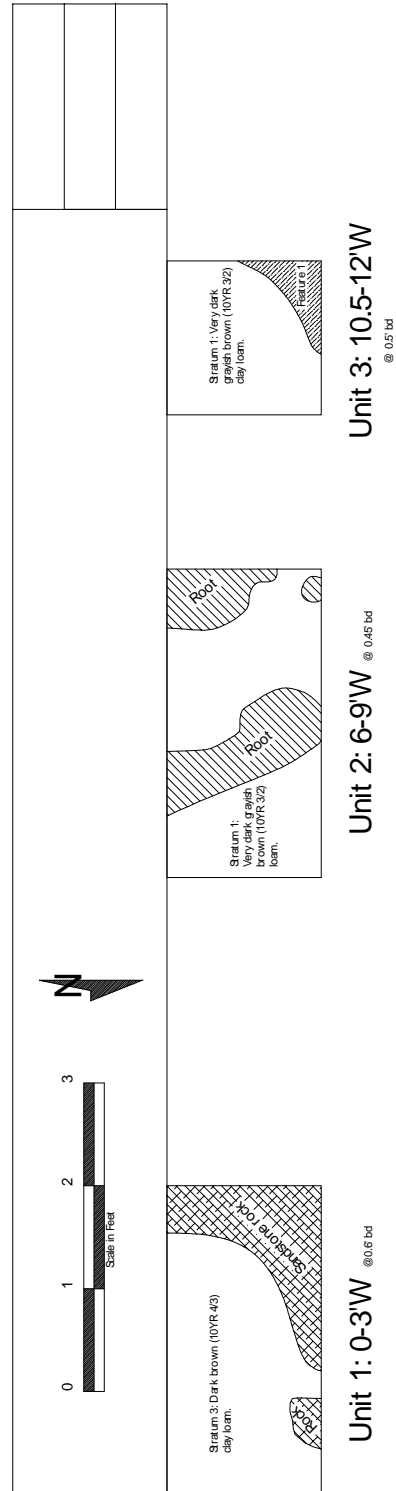


Figure 5: Plan view of excavations.

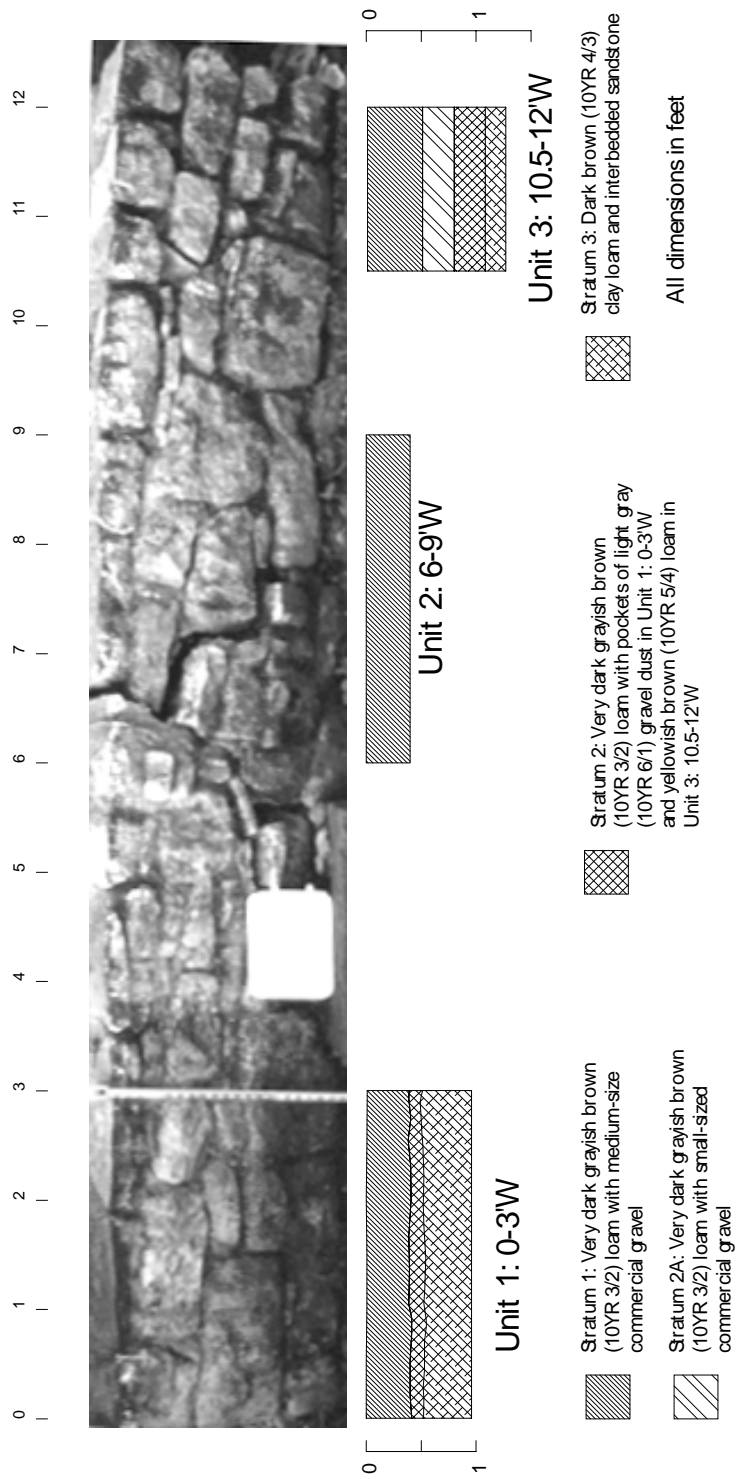


Figure 6: Profile drawing of excavations.

Unit 3 was located between 10.5 and 12 feet west of the southeast corner of the existing wall and designated "Unit 2: 10.5-12' W". The unit measured only one and one-half feet wide due to the obvious presence of the root mass to the east and the entrance steps to the south areaway to the west. The surface (like Unit 1:0-3'W) was covered with very dark grayish brown (Munsell 10YR 3/2) loam which has been designated Stratum 1 (Figure 9). At the depth of 0.5 fbs in the northwest corner of the unit a a triangular compacted area of earth (plus some other substance) that may have served as a recently constructed (post 1940's) pathway appeared. Lying completely in non-historic fill and measuring approximately 0.15 feet thick it was designated Feature 1 (Figure 10). The bottom of Feature 1 appeared to mark the upper limit of Stratum 2 at 0.5 fbs. Stratum 2 was composed of very dark grayish brown (Munsell 10YR 3/2) loam but with smaller, non-commercial gravel which continued to 0.8 fbs. Stratum 3 began at 0.8 fbs across the entire unit. It was defined as mixed very dark grayish brown (Munsell 10YR 3/2) loam and yellowish brown (Munsell 10YR 5/4) mixed soils (similar to Stratum 2 in Unit 1:0-3'W). Stratum 3 terminated at 1.1 fbs and was replaced by Stratum 4, defined as brown/dark brown (Munsell 10YR 4/3) clay loam and dense rock (identical to Stratum 3 in Unit 1:0-3' W). Excavation was suspended at that depth.

Excavation of three archeological test units in the proposed location of the foundation of the relocated south areaway wall revealed consistent stratigraphy; a very modern layer (Stratum 1) of soil and commercial gravel (with some form of bituminous walkway material to reinforce the soil and serve as a pathway from the steps in Unit 310.5-12'W), a stratum (Stratum 2) of very dark grayish brown clay loam probably representing an earlier yard surface but still dating to the twentieth century as evidenced by the complete lack of nineteenth century artifacts, and the natural subsoil composed of interbedded sandstone and sandstone sediments.

4 Conclusions

Excavation of three archeological test units in the proposed location of the relocated south areaway wall did not identify any significant archeological resources. The project will have "no effect" on archeological resources.

5 References Cited

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